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| 10/812,542 | 03/30/2004 | Shau-Lin Franklin Chen | 4932 | 3423 |
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| BASF CATALYSTS LLC 100 CAMPUS DRIVE FLORHAM PARK, NJ 07932 | | | EXAMINER NGUYEN, CAM N | |
| | | | ART UNIT 1793 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/812,542

Applicant(s)

CHEN ET AL.

Examiner

Cam N. Nguyen

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/16/07 (an amendment/response).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 21-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 21-26 is/are rejected.
- 7) ☒ Claim(s) 27-29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on originally filed is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicants' amendments and remarks, filed on 8/16/07, have been made of record and entered. Claims 1-4, 6, & 10 have been amended. Claims 11-20 have been canceled. Claims 21-29 have been added.

Claims 1-10 & 21-29 are currently pending.

2. Newly submitted claims 27-29 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

In accordance with the restriction requirement under rule 35 U.S.C. 121, the claims are divided into 2 groups as follows.

- I. Claims 1-10 & 21-26, drawn to an exhaust gas treatment catalyst, classified in class 502, subclass 325+.
- II. Claims 27-29, drawn to an exhaust gas treatment system comprising a catalyst, classified in class 422, subclass 177+.

The inventions are distinct, each from the other because:

Inventions I and II are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product, and the species are patentably distinct (MPEP § 806.05(j)). In the instant case, the intermediate product is deemed to be useful as an adsorbent for separation of gases or a membrane material for used in the fuel cell systems and

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the inventions are deemed patentably distinct because there is nothing on this record to show them to be obvious variants.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, and have acquired a separate status in the art as shown by their different classification, and because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 27-29 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP 821.03.

Claim Objections

3. Claims 25 & 26 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 22 & 23. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

The subject matter recited in claims 25 & 26 appear to be the same as recited in claims 22 & 23.

Claim Rejections - 35 USC § 112 (Second Paragraph)

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 22-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 22 recites the limitation "stabilizers" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102(b)

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-7, 9-10, & 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Shelef et al., "hereinafter Shelef", (US Pat. 5,556,825).

Shelef discloses an automotive catalyst system, which comprises: a substrate; a gamma-alumina washcoat support material; a substantially atomic layer thickness of lanthana deposited on said alumina; a layer of oxygen storage material selected from the group consisting of ceria, praseodymia, and mixtures thereof deposited on said lanthana coating; and at least a partial layer of catalytic material selected from platinum, palladium, or mixtures thereof deposited on said oxygen storage material (see col. 12, claim 1). The system further includes catalytic material selected from the group consisting of rhodium, and rhodium and platinum, carried on zirconia deposited onto said substrate (see col. 12, claim 18). See entire reference for further details.

Shelef discloses a catalyst system having multi catalytic layers containing the claimed metal components and support material on the claimed substrate, thus the claims are anticipated by the reference.

With respect to the limitation on "the catalyst comprises at least two catalytic zones" in claim 10, it is considered this recitation is apparatus (catalyst system) recitation and not catalytic structure recitation of the claimed catalyst. Thus, it is not required.

With respect to claim 21, the limitation on "the first layer comprises at least 76 weight % of one refractory metal oxide" is inherently met by the teaching of the reference in view of the teaching that the gamma-alumina support is applied or deposited onto a substrate, which provides for 100 weight % of the refractory metal oxide that the claim is required.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shelef et al., "hereinafter Shelef", (US Pat. 5,556,825).

Shelef discloses a catalyst system as described above, but silent with respect to the thickness of each catalytic layers.

It would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to have predetermined optimum thickness for each of said catalytic layers in

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order to achieve an effective catalyst system for treating automotive exhaust gases, in view of In re Boesch.

Response to Applicants' Arguments

10. Applicants' remarks filed on August 16, 2007 has been fully considered, but not deemed persuasive in view of the new ground of rejection(s) and/or objection(s) above and the following reasons.

Applicants urged, that "Shelef discloses an automotive catalyst system that consists of a single washcoat layer of material. The four coating that discussedare all present on individual particles contained within on washcoat layer". This is not found persuasive because Shelef clearly teaches the same number of catalyst layers containing the same metal components, which deposited on the same substrate material as being required. The claimed catalyst structure does not appear to be distinguished from the disclosed catalyst structure. Thus, the rejections are maintained.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

12. Claims 1-10 & 21-29 are pending. Claims 1-10 & 21-26 are rejected. Claims 27-29 are withdrawn due to nonelected (distinct) invention(s). No claims are allowed.

Contacts

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Primary Examiner Cam N Nguyen, whose telephone number is 571-272-1357. The examiner can normally be reached on M-F, 9:00 AM - 6:30 PM, at alternative work site.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Cam N. Nguyen/

Nguyen/cnn

Primary Examiner

October 26, 2007

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